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a apparatus is responsive to control commands [command settings], including user-defined commands to carry out specific functions associated with the [settings and] control commands.

Claim 16, line 2, insert the word --received-- before the word "data".

Claim 22 (second occurrence), line 1, delete the numeral "22" and insert therefor the numeral --23--.

~~Cancel claim 4.~~

REMARKS

Reconsideration of the application as amended is respectfully requested.

In the action of September 6, 1996, the examiner objected to the drawings; objected to the abstract and the specification on the basis of several minor informalities; objected to claims 2 and 22, again on the basis of minor informalities; rejected claims 5, 9, 21 and 22-25 under 35 U.S.C. §112, first paragraph; rejected claims 1-25 under 35 U.S.C. §112, second paragraph, as being indefinite; and rejected claims 1-4, 6, 10-12, 14 and 17-20 under 35 U.S.C. §102 as anticipated by Chiba et al. The examiner indicated that claims 7, 13 and 15 contain allowable subject matter.

With respect to the drawings, applicants herewith submit the formal drawings. In the formal drawings, numeral 58 refers to the modem. There is no use (nor was there previously) of numeral 46 in the drawings relative to the modem. The use of numeral 46 in the specification has been deleted. Numeral 44 refers to a telephone line, while numeral 59 refers to a serial communications interface (page 8, line 35 of the specification). Those designations were correct in the drawings as filed. Numeral 117 as used originally for the transmit buffer has now been changed to 119, while reference character 40 used originally to designate a local terminal unit has been changed to 42. The "fast meter" routine refers to element 134; use of numeral 106 in the specification at page 16, lines 14 and 15, has been changed to 134.

With respect to the noted informalities in the disclosure (paragraph 5), each of the requested changes have been made. As noted above, the "fast meter routine" refers to element 134. The suggested change to the Abstract has also been made. The suggested

changes to claims 2 and 22 have also been made.

The examiner's rejection of claims 5, 9, 21 and 22-25 under 35 U.S.C. §112, first paragraph, is respectfully traversed. Claim 5 refers to an automatic configuring of the ports for selected devices. Enabling support for that claim is present at page 9, line 31, through page 10, line 3, and page 10, line 34 through page 11, line 5. Each port has the capability of being set or "configured" to accept data having defined communication parameters, such as baud rate, number of data bits, etc. This can be done automatically through pre-programmed instructions when the communications processor itself knows the required communication parameters for a particular device. The required parameters are stored in memory for each port position.

Claim 9 refers to the automatic requesting and obtaining of data from a particular port device. Enabling support for that limitation is found at page 13, line 15 through page 14, line 1, and page 15, line 33 through page 16, line 10. Commands requesting data can be sent at specific intervals in accordance with the user commands and data comes back from the port device in response to that request.

Claim 21 refers to buffer storage at each port for binary and ASCII data. See Figure 3, elements 106 and 108, and page 12, line 34 through page 13, line 3 of the specification. This provides clear support for buffer storage at each port.

Claims 22-25 refer to "parsing" of incoming information. Enabling support for those limitations is set forth at page 13, lines 7-14 and at page 17, line 29 through page 18, line 7. Parsing is a conventional data processing procedure which is explained in those portions of the disclosure.

Hence, the examiner's rejection of claims 5, 9, 21 and 22-25 under 35 U.S.C. §112, first paragraph, should be withdrawn.

With respect to the rejection of claims 1-25 under 35 U.S.C. §112, second paragraph, the applicant has amended claim 1 to delete the terms "such as", and has amended claims 8 and 16 to provide proper antecedent basis for the specified terms.

With respect to the prior art, the examiner has relied on a single reference, i.e. Patent No. 5,428,553 to Chiba. A correct

understanding of Chiba is important to understanding the difference between that reference and applicants' invention. Chiba is basically a complex multifunction digital relay for protection of a power system. As such, its inputs are the voltage and current values from power lines. There are no "ports" to which electronic devices may be connected. Within the device itself, there are a number of separate units, each one of which is capable of performing a specific relay function. The number and "kind" of units can be varied to perform different specific functions. This basic characterization of Chiba is noted throughout the specification of Chiba. Note for instance col. 5, lines 41-50, col. 9, lines 6-34, and col. 11, lines 31-41, as just a few examples. There is a capability of communication between the various units within the processor via a "dumb" communication bus and there is a master control processor. However, all of the processing units are within the relay itself. The inputs to the relay are voltage and current inputs taken from the power line itself.

Applicants' invention, on the other hand, is a communications processing apparatus which includes a number of input ports, to which are connected a variety of intelligent electronic devices, including protective relays, but also other devices, such as computers, remote terminal units, and various output devices, including printers and modem connections to other devices. Applicants' apparatus has the capability, through user defined commands, to obtain processed information from the intelligent electronic devices, as well as fast meter and other input information. Because each of the IED devices connected to the various ports has a particular information communication format associated with it, the apparatus has the capability, under the control of command functions, of configuring each one of the ports to receive and transmit data to and from the device connected to it. The apparatus further includes means for accepting and storing user commands which are then utilized by the device to accomplish various kinds of specific data retrieval and transmitting functions between its various ports, as well as a capability of storing the data received from the port devices.

The claimed apparatus is hence not a multi-function relay (like Chiba), but rather a communications processor which receives, stores and transmits already processed data or other information produced by protective relays as well as other devices, in accordance with specific user commands. It can transmit information to remote devices as well. The apparatus includes the capability of configuring each port to communicate with the specific device connected to it. Hence, there is a fundamental structural and functional distinction between Chiba and the claimed device.

Claim 1 defines that qualitatively different apparatus, including specific limitations not taught by Chiba. First, claim 1 calls for a plurality of ports through which data may be received and transmitted from and to various intelligent electronic devices. Chiba does not disclose such a port capability. Chiba teaches receiving direct data input from the power lines, i.e. current and voltage information, but Chiba is not capable of receiving data input from devices such as external protective relays. It does not have any ports to which such devices can be connected.

Second, applicants' invention has the structure and capability, through user-defined commands and data storage within the apparatus itself, to configure the communication parameters for each of its ports, so that a variety of IEDs can be connected to the apparatus. Information is transmitted and received because the ports are properly configured and because receiver/transmitter means are connected to the ports. There is no such structure or capability in the Chiba reference.

Third, applicants' apparatus has the capability of receiving and storing user-defined commands which control the requesting, processing and transmitting (even to remote devices) of data received at each of the ports. Chiba does not have that capability. On the contrary, as explained above, it has a number of internal "units" which each have a specific processing function capability. There is no teaching in Chiba of receiving processed data from various ports and then transmitting that data to different ports. Hence, not only are the two devices qualitatively different, i.e. different in kind, there are specific structural

differences set forth in the claims which reflect that qualitative difference. Claim 1 is thus patentable over the Chiba reference.

Dependent claims 2-25 remain in the case, except for claim 4, which has been canceled. Since all of those claims are dependent upon amended claim 1, which is allowable, those claims are also allowable. Note, however, particular claims which themselves define patentable subject matter. These include claim 5, which includes means for automatically configuring a port for selected devices. Such automatic configuration of ports is not disclosed or suggested in Chiba. Claim 9 includes the automatic requesting of data from a particular port in response to a command setting. Chiba as discussed above is incapable of such action and does not disclose such a concept. Claim 18 includes buffer storage associated with each port so that it can temporarily store information received from each port device. The Chiba reference does not disclose such buffer storage associated with each port. Claim 20 includes long term, non-volatile memory for storage of selected data. The Chiba reference does not appear to disclose such long term data storage. Claim 21 includes means for separate storage of binary format and ASCII format data at each port. This is not shown by Chiba.

In view of the above, claims 1-3 and 5-25 are in condition for allowance, and such action on the part of the examiner is respectfully requested.

A two-month extension of time is respectfully requested. Enclosed is the required fee of \$195.00. Any additional fees can be charged to Deposit Account No. 07-1900.

Respectfully submitted

JENSEN & PUNTIGAM, P.S.

Clark A. Puntigam
Clark A. Puntigam #25,763

(206) 448-3200

CAP:gh

Enclosures: Formal drawings
Postcard, check